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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/673,238	09/30/2003	Keiji Ishibashi	001425-123	5389

21839 7590 03/07/2006

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EXAMINER
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MOORE, KARLA A

ART UNIT	PAPER NUMBER
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1763

DATE MAILED: 03/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/673,238

Applicant(s)

ISHIBASHI ET AL.

Examiner

Karla Moore

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2-7 is/are allowed.
- 6) ☒ Claim(s) 1 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary.

Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,593,548 to Matsumura et al. in view of JP 2002-093713 to Taniguchi.

4. The applied reference has a common inventor and a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). This rejection might also be

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overcome by showing that the reference is disqualified under 35 U.S.C. 103(c) as prior art in a rejection under 35 U.S.C. 103(a). See MPEP § 706.02(I)(1) and § 706.02(I)(2).

5. Matsumura et al. disclose a heating element CVD system substantially as claimed in Figures 1-10 and comprising: a processing container in which a predetermined processing is performed to a substrate held by a substrate holder disposed therein; an evacuation system which is connected to the processing container and evacuates the processing container to a vacuum; a raw material gas supply system for supplying a predetermined raw material gas into the processing container; and a heating element which is disposed in the processing container and is supplied with electric power from an electric supply mechanism, thereby being heated to high temperatures; wherein the raw material gas introduced into the processing container from the raw material gas supply system is decomposed and/or activated by the heating element kept at high temperatures to form a thin film on the substrate held by the substrate holder; twherein one or a plurality of connection terminal is placed in the processing container, each of the connection terminal holders holds a plurality of connection terminals at a predetermined position with electrical insulation therebetween; each of the connection terminals connects the heating element to the electric power supply mechanism electrically; the heating element connected to the connection terminals is supported facing the substrate holder; and a connection region of the heating element connected to the connection terminal is not exposed to a space in the processing container.

6. However, Matsumura fail to disclose the system further comprising a shield plate having a heating element passing hole through which the heating element passes in a non-contact manner and a plurality of through holes for passing gas is arranged between a part of the heating element extending into the processing container through the heating element passing hole and a surface of the connection terminal holder facing the inside of the processing container.

7. Taniguchi discloses a heating element CVD system comprising a shield plate (Figure 1, a plurality of plates, 22) having a heating element passing hole (23) through which the heating element passes in a non-contact manner and a plurality of through holes (between plates 22) for passing gas is arranged between a part of the heating element extending into the processing container through the heating element passing hole and a surface of the connection terminal holder facing the inside of the processing

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container for the purpose of controlling the heat influence of the heating element exerted on the substrate (abstract).

8. It would have been obvious to one of ordinary skill in the art at the time the Applicant's invention was made to have provided a shield plate in Matsumura et al. in order to control the heat influence of the heating element exerted on the substrate as taught by Taniguchi.

9. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over WO 02/25712 A1 to Ishibashi et al. in view of JP 2002-093713 to Taniguchi.

10. Ishibashi et al. disclose a heating element CVD system substantially as claimed in Figures 1-10 and comprising: a processing container in which a predetermined processing is performed to a substrate held by a substrate holder disposed therein; an evacuation system which is connected to the processing container and evacuates the processing container to a vacuum; a raw material gas supply system for supplying a predetermined raw material gas into the processing container; and a heating element which is disposed in the processing container and is supplied with electric power from an electric supply mechanism, thereby being heated to high temperatures; wherein the raw material gas introduced into the processing container from the raw material gas supply system is decomposed and/or activated by the heating element kept at high temperatures to form a thin film on the substrate held by the substrate holder; wherein one or a plurality of connection terminal is placed in the processing container, each of the connection terminal holders holds a plurality of connection terminals at a predetermined position with electrical insulation therebetween; each of the connection terminals connects the heating element to the electric power supply mechanism electrically; the heating element connected to the connection terminals is supported facing the substrate holder; and a connection region of the heating element connected to the connection terminal is not exposed to a space in the processing container.

11. However, Ishibashi et al. fail to disclose the system further comprising a shield plate having a heating element passing hole through which the heating element passes in a non-contact manner and a plurality of through holes for passing gas is arranged between a part of the heating element extending

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into the processing container through the heating element passing hole and a surface of the connection terminal holder facing the inside of the processing container.

12. Taniguchi discloses a heating element CVD system comprising a shield plate (Figure 1, a plurality of plates, 22) having a heating element passing hole (23) through which the heating element passes in a non-contact manner and a plurality of through holes (between plates 22) for passing gas is arranged between a part of the heating element extending into the processing container through the heating element passing hole and a surface of the connection terminal holder facing the inside of the processing container for the purpose of controlling the heat influence of the heating element exerted on the substrate (abstract).

13. It would have been obvious to one of ordinary skill in the art at the time the Applicant's invention was made to have provided a shield plate in Ishibashi et al. in order to control the heat influence of the heating element exerted on the substrate as taught by Taniguchi.

#### ***Terminal Disclaimer***

14. The terminal disclaimer filed on 12 December 2005 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of U.S. Patent 6,593,548 has been reviewed and is accepted. The terminal disclaimer has been recorded.

#### ***Allowable Subject Matter***

15. Claims 2-7 are allowed.

16. The following is an examiner's statement of reasons for allowance: The prior art of record fails to teach or fairly suggest a connection structure between a heating element and an electric power supply of a heating element CVD system as claimed and further comprising a connection pin and a connection terminal provided with a pin receiver having a small hole and a slit. Nor does the prior art of record fairly teach or suggest a connection structure between a heating element and an electric power supply of a heating element CVD system as claimed and further comprising an insulator arranged so as to cover a

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part facing the first inside hollow portion of the connection part and the wiring part, or a surface of the connection terminal holder facing the first inside hollow portion is covered with an insulator.

17. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karla Moore whose telephone number is 571.272.1440. The examiner can normally be reached on Monday-Friday, 9:00 am-6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Parviz Hassanzadeh can be reached on 571.272.1435. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Karla Moore  
Patent Examiner  
Art Unit 1763  
1 March 2006